RE: Plainwell Impoundment 2010 Bank Monitoring Report comments

SAMUEL BORRIES to: Garbaciak, Steve 04/26/2011 02:14 PM
Bcc: SAMUEL BORRIES

Steve,
The corrections look okay to me. Please incorporate them into a final report. Thank you.

"Garbaciak, Steve" Sam: Thanks for the comments. As we discuss... 04/22/2011 11:42:02 AM

From:	"Garbaciak, Steve" <Steve.Garbaciak@arcadis-us.com>
To:	SAMUEL BORRIES/R5/USEPA/US@EPA
Cc:	"Griffith, Garry T." <gtgriffi@GAPAC.com>, "Erickson, Michael" <Michael.Erickson@arcadis-us.com>
Date:	04/22/2011 11:42 AM
Subject:	RE: Plainwell Impoundment 2010 Bank Monitoring Report comments

Sam:

Thanks for the comments. As we discussed, we would like to submit a final report that addresses the comments. Can you please review the following proposed changes to the text and, if acceptable to you, we will revise the report accordingly and submit it as final. Thanks.

USEPA Comment 1: *Some of the 2010 transects are truncated when compared to previous years' surveys. An explanation for why the data was collected in this fashion should be explained in the report. Future transect data collections should extend for the length of the previous transects so a full comparison between years' is possible.*

ARCADIS Response: Some survey transects were truncated due to high water levels which limited access to near shore areas. Future transects will be collected to the limits established in the 2009 Former Plainwell Impoundment Bank Conditions Monitoring Report. The text of the report will be revised as follows:

> In addition to the visual inspection of the banks, bank profiles were surveyed at 11 permanently-monumented transect locations in May 2010 to compare bank geometry to post-construction conditions (Figure 2). Due to high water levels impeding access to the near shore areas at the time of the survey, some transects were terminated before the toe of slope. All transect locations will be resurveyed in the spring (May/June) of the next two monitoring years (2011 and 2012) during river water levels that will allow the collection of transect data to the limits established in 2009. Future comparisons will present the surveyed cross-section from the previous year overlaid with the new survey data to evaluate changes in bank geometry. Although there is no quantitative performance standard associated with this effort, the comparison of bank geometry over time will be used in combination with

the visual inspection and the BEHI results to develop a weight-of-evidence approach to evaluating bank stability.

USEPA Comment 2: *Section 4.2, Comparison of Surveyed Banks - Some of the text descriptions in this section appear to be inconsistent with the bank profiles. Some of the bank profiles show erosion between the 2009 and 2010 monitoring events and needs to be more clearly indicated in the text description (e.g. T-2S, T-4N, T-4S, T-6S). The issue of the truncated profiles plays into limiting the utility of the description.*

ARCADIS Response: The report will be revised to make the bank descriptions consistent with the bank profiles and explain which transects did not evaluate the bank toe. Individual bank descriptions will be revised as follows:

- T-2S -This transect is located on the south bank in Removal Area 3B. It appears to be similar to its design with a stable slope to a point between the prism-out 2-year and median water elevations. ~~and some possible sediment buildup on the bank and at the toe of the bank.~~ Below this point, some toe erosion can be noted. ~~There is no apparent change in the geometry of the restored bank at this location from 2009 to 2010.~~ This bank is currently characterized as stable.

- T-3N - This transect is located on the north bank in Removal Area 4A. A small amount of erosion may be indicated by the differences between design and survey, but a stable bank slope appears to have established. The bank angle appears to have increased from 2009 to 2010 as some material has eroded. The 2010 transect survey did not extend to the toe of bank to enable an evaluation of the status of the bank toe. This transect is slightly downstream of the bank area that exhibited an increase in bank erosion potential from 2009 to 2010 due to erosion creating a more vertical bank face. The erosion observed does not appear to be affecting the stability of the bank at this location. This bank is currently characterized as stable.

- T-4N - This transect is located on the north bank in Removal Area 5A. The bank at this location currently appears very similar to the geometry observed in 2009. The 2010 survey did not extend to the toe of slope to enable an assessment of its stability Overall, this bank is currently characterized as stable.

- T-4S - This transect is located on the south bank in Removal Area 4B. The accumulation of sediment at the top-of-bank that was observed in 2009 exhibits some slight erosion and bank steepening. The lower portion of the bank exhibits a stable slope but also shows signs of some lateral erosion. The 2010 survey did not extend to the bank toe to enable an assessment of its stability. Overall, this portion of the bank is remaining stable.

- T-6S - This transect is located on the south bank in Removal

Area 7. This portion of the south bank was repaired in 2008 by the addition of rock at the toe and the installation of a coir log at the prism-out 2-year water elevation. The coir log~~, is~~ visible on the cross-section should assist in the accumulation of sediment on the upper portion of the bank. The portion of the bank below the 2-year water elevation has fluctuated since restoration, but is currently at a stable slope. The portion of the bank below the prism-out median water elevation shows some erosion since 2009, but the addition of rock toe protection in this area should stabilize this bank. ~~The coir log should assist in the accumulation of sediment on the upper portion of the bank.~~ This bank is currently characterized as stable.

- T-8S - This transect is located on the south bank in Removal Area 9B. Some significant erosion was concluded to be occurring at this location in 2009, as evidenced by the loss of the designed slope and a steepening of the bank angle at the median water level. Therefore, this portion of the south bank was repaired in 2009 by the addition of rock at the toe and the installation of a coir log at the prism-out median water elevation to protect the lower bank shelf. The coir log~~, is~~ visible on the cross-section should assist in the accumulation of sediment on the upper portion of the bank. Following the repair, the portion of the bank immediately below the median water elevation is currently at a stable slope. ~~The coir log should assist in the accumulation of sediment on the upper portion of the bank.~~ This bank is currently characterized as stable.

- T-9N - This transect is located on the north bank in Removal Area 10A. There is no apparent change in the geometry of the restored bank at this location from 2009 to 2010. However, the 2010 survey did not extend to the toe of the bank to enable an assessment of its stability. This bank is currently characterized as stable.

- T-10S - This transect is located on the south bank in Removal Area 10B. The bank appears similar to the 2009 geometry in 2010, but a small amount of loss of material from the bank face is evident in 2010. The 2010 survey did not extend to the toe of bank to enable an assessment of the stability of this area. Overall, this bank is currently characterized as stable.

- T-11S - This transect is located on the south bank in Removal Area 13B. There is no apparent change in the geometry of the restored bank at this location from 2009 to 2010, except for a small amount of loss of accumulated material at the median water elevation. The 2010 survey did not extend to the toe of bank to enable an assessment of the stability of this area. Overall, this bank is currently characterized as stable.

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-----Original Message-----
From: Borries.Samuel@epamail.epa.gov [mailto:Borries.Samuel@epamail.epa.gov]
Sent: Friday, April 08, 2011 4:23 PM
To: Garbaciak, Steve
Subject: RE: Plainwell Impoundment 2010 Bank Monitoring Report comments

Hi Steve,
Here is the comment letter we spoke about earlier. I will be glad to share the final documents for the Portage Creek Area once things are signed and final. Hope all is well. Call with questions. Thanks.

(See attached file: 2010 Bank Monitoring Report comment letter.PDF)